

State of New Hampshire
Division of Plant and Property Management
Bureau of Purchase and Property
25 Capitol Street, State House Annex
Concord, New Hampshire 03301-6398

Date: 8/16/2004

Bid No.: 91

Date of Bid Opening: 8/19/2004

Time of Bid Opening: 1:45

PLEASE DIRECT ANY QUESTIONS REGARDING THIS BID TO: ODIE CHAMPAGNE, PURCHASING AGENT/kc
TEL. NO: (603) 271-3146 - FAX No. (603) 271-2700

BID INVITATION FOR: CONCRETE ELECTRIC VAULTS, SUPPLY AND DELIVER

Unless specifically amended or deleted by the Division of Plant and Property Management, the following General Terms and Conditions apply to this Bid and any resulting Purchase Order or Contract.

GENERAL CONDITIONS AND INSTRUCTIONS:

NATURE OF, AND ELIGIBILITY TO RESPOND. This bid invitation is submitted in accordance with Chapter 21-1, and rules promulgated thereunder, and constitutes a firm and binding offer. A bid may not be withdrawn unless permission is obtained from the Bureau of Purchase and Property.

Bids may be issued only by the Bureau of Purchase and Property and are not transferable.

SAMPLES AND DEMONSTRATIONS. When samples are required they must be submitted free of costs and will not be returned.

Items left for demonstration or evaluation purposes shall be delivered and installed free of charge and shall be removed at no cost to the State. Demonstration units shall not be offered to the State as new equipment.

Bids. Bids must be received at the Bureau of Purchase and Property before the date and time specified for the opening. Bids must be submitted on this bid form or exact copies and must be typed or clearly printed in ink. Corrections must be initialed. Bids are to be made less Federal Excise Tax and no charge for handling unless required by law.

Bids will be made available to the public after the time of award. Bid results will be given by mail only if requested in writing and accompanied by a self-addressed, stamped business size envelope.

SPECIFICATIONS. Vendors must submit on items as specified. Proposed changes must be submitted in writing and received at the Bureau of Purchase and Property at least five (5) working days prior to the bid opening. Vendors shall be notified in writing if any changes to the specifications are made.

AWARD. The award will be made to the responsible Vendor submitting a conforming RFB meeting specifications at the lowest cost unless other criteria are noted in the RFB. Unless otherwise noted, the award may be made by individual items.

If there is a discrepancy between the unit price and the extension, the unit price will prevail.

When identical low bids are received the award will be made in accordance with the Administrative Rules.

Discounts will not be considered in making award but may be offered on the Invoice for earlier payment and will be applicable on the date of completion of delivery or receipt of Invoice, whichever is later. On orders specifying split deliveries, discounts will apply on the basis of each delivery or receipt of Invoice, whichever is later.

PATENT INFRINGEMENT. Any responding vendor who has reason to believe that any other responding vendor will violate a patent should such responding vendor be awarded the contract shall set forth in writing, prior to the date and time of opening, the grounds for his belief and a detailed description of the patent.

ASSIGNMENT PROVISION. The responding vendor hereby agrees to assign all causes of action that it may acquire under the antitrust laws of New Hampshire and the United States as the result of conspiracies, combinations, or contracts in restraint of trade which materially affect the price of goods or services obtained by the state under this contract if so requested by the State of New Hampshire.

FEDERAL FUNDS. This Division of Plant and Property Management, under RSA 21-1:14, VIII shall assure the continuation or granting of federal funds or other assistance not otherwise provided for by law by following the Federal Procurement Standards.

STATE'S OPTIONS: The Bureau of Purchase and Property reserves the right to reject or accept all or any part of any bid, to determine what constitutes a conforming bid, to award the bid solely as it deems to be in the best interest of the State, and to waive irregularities that it considers not material to the bid.

PUBLIC INFORMATION: The responding vendor hereby acknowledges that all information relating to this bid and any resulting order (including but not limited to fees, contracts, agreements and prices) are subject to these laws of the State of New Hampshire regarding public information.

PERSONAL LIABILITY: The responding vendor agrees that in the preparation of this bid or the execution of any resulting contract or order, representatives of the State of New Hampshire shall incur no liability of any kind.

PROOF OF COMPLIANCE. The responding vendor may be required to supply proof of compliance with proposal specifications. When requested, the responding vendor must immediately supply the Bureau of Purchase and Property with certified test results or certificates of compliance. Where none are available, the State may require independent laboratory testing. All costs for such testing, certified test results or certificate of compliance shall be the responsibility of the responding vendor.

FORM OF CONTRACT. The terms and conditions set forth in any additional Terms and Conditions by the Bureau of Purchase and Property are part of the bid and will apply to any contract awarded the responding vendor unless specific exceptions are taken and accepted and will prevail over any contrary provisions in Terms and Conditions submitted by the responding vendor.

OFFER. The undersigned hereby offers to sell to the State of New Hampshire the commodities or services indicated in the following page(s) of this Bid at the price(s) quoted in complete accordance with all conditions of this Bid.

Company

Name: _____

Address: _____

Tel.:(local) _____ **(Toll free)** _____

Fax#: _____

Authorized

Signature: _____

(TYPE OR PRINT NAME)

This document must be signed by a person who is authorized to legally obligate the responding vendor. A signature on this document indicates that all State of New Hampshire terms and conditions are accepted by the responding vendor and that any and all other terms and conditions submitted by the responding vendor are null and void, even if such terms and conditions have terminology to the contrary. The responding vendor shall also be subject to State of New Hampshire terms and conditions as stated on the reverse of the purchase order.

CONTRACT TERMS AND CONDITIONS

1. The State of New Hampshire, acting through the Division of Plant and Property Management, engages the firm or individual ("the Vendor") to perform the services and/or sale of goods, described in the attached State documents, if any, and the Vendor's bid or quotation, both of which are incorporated herein by reference.

2. COMPLIANCE BY VENDOR WITH LAWS AND REGULATIONS. In connection with the performance of this agreement, the Vendor shall comply with all statutes, laws, regulations, and orders of federal, state, county or municipal authorities which shall impose any obligation or duty upon the Vendor, including, but not limited to civil rights and equal opportunity laws.

3. TERM. The contract, and all obligations of the parties thereunder, shall become effective on a specified date and shall be completed in their entirety prior to a specified date. Any work undertaken by the Vendor prior to the effective date shall be at his sole risk and, in the event that the contract shall not become effective, the State shall be under no obligation to reimburse the Vendor for any such work.

4. CONTRACT PRICE. The contract price, a payment schedule and a maximum limitation of price shall be as specified by the bid invitation and the Vendor's bid. All payments shall be conditioned upon receipt, and approval by the State, of appropriate vouchers and upon satisfactory performance by the Vendor, as determined by the State. The payment by the State of the Contract Price shall constitute complete reimbursement to the Vendor for all expenses of any nature incurred by the Vendor in the performance by the Vendor and complete payment for the Services. The State shall have no other liability to the Vendor.

5. DELIVERY. If the vendor fails to furnish items and/or services in accordance with all requirements, including delivery, the state may re-purchase similar items from any other source without competitive bidding, and the original vendor may be liable to the state for any excess costs.

If a vendor is unable to complete delivery by the date specified, he must contact the using agency. However, the agency is not required to accept a delay to the original delivery date. All deliveries are subject to inspection and receiving procedure rules as established by the State of New Hampshire. Deliveries are not considered accepted until compliance with these rules has been established. State personnel signatures on shipping documents shall signify only the receipt of shipments. All deliveries shall be FOB Destination.

6. INVOICING. All invoices must be in triplicate showing Order Number, Unit and Extension Prices and discounts allowed. A separate invoice shall be submitted for each order. Unless otherwise noted on the invitation to bid or purchase order, payment will not be due until thirty (30) days after all services have been completed, or all items have been delivered, inspected and accepted or the invoice has been received at the agency business office, whichever is later.

7. PERSONNEL.

7.1. The Vendor shall disclose in writing the names of all owners (5% or more), directors, officers, employees, agents or subcontractors who are also officials or employees of the State of New Hampshire. Any change in this information shall be reported in writing within fifteen (15) days of their occurrence.

7.2. The person signing this agreement on behalf of the State, or his or her delegee ("Contracting Officer") shall be the State's representative for purposes of this agreement. In the event of any dispute concerning the interpretation of this agreement, the Contracting Officer's decision shall be final.

8. EVENT OF DEFAULT; REMEDIES.

8.1. Any one or more of the following acts or omissions of the Vendor shall constitute an event of default hereunder ("Events of Default"):

8.1.1. failure to deliver the goods or services satisfactorily or on schedule; or

8.1.2. failure to submit any report required hereunder; or

8.1.3. failure to perform any of the other covenants and conditions of this agreement.

8.2. Upon the occurrence of any Event of Default, the State may take any one, or more, or all, of the following actions:

8.2.1. give the Vendor a written notice specifying the Event of Default and requiring it to be remedied within, in the absence of a greater or lesser specification of time, thirty (30) days from the date of the notice; and if the Event of Default is not timely remedied, terminate this agreement, effective two (2) days after giving the Vendor notice of termination; and

8.2.2. give the Vendor a written notice specifying the Event of Default and suspending all payments to be made under this agreement and ordering that the portion of the Contract Price, which would otherwise accrue to the Vendor during the period from the date of such notice until such time as the State determines that the Vendor has cured the Event of Default, shall never be paid to the Vendor; and

8.2.3. set off against any other obligation the State may owe to the Vendor any damages the State suffers by reason of any Event of Default; and

8.2.4. treat the agreement as breached and pursue any of its remedies at law or in equity, or both.

9. WAIVER OF BREACH. No failure by the State to enforce any provisions hereof after any Event of Default shall be deemed a waiver of its rights with regard to that Event, or any subsequent Event. No express failure of any Event of Default shall be deemed a waiver of any provision hereof. No such failure or waiver shall be deemed a waiver of the right of the State to enforce each and all of the provisions hereof upon any further or other default on the part of the Vendor.

10. VENDOR'S RELATION TO THE STATE. In the performance of this agreement the Vendor is in all respects an independent contractor, and is neither an agent nor an employee of the State. Neither the Vendor nor any of its officers, employees, agents or members shall have authority to bind the State nor are they entitled to any of the benefits, workmen's compensation or emoluments provided by the State to its employees.

11. ASSIGNMENT AND SUBCONTRACTS. The Vendor shall not assign, or otherwise transfer any interest in this agreement without the prior written consent of the State. No work required by this contract shall be subcontracted without the prior written consent of the State.

12. INDEMNIFICATION. The contractor shall defend, indemnify and hold harmless the State, its officers and employees, from and against any and all losses suffered by the State, its officers and employees, and any and all claims, liabilities or penalties asserted against the State, its officers and employees, by or on behalf of any person, on account of, based on, resulting from, arising out of (or which may be claimed to arise out of) the acts or omissions of the Vendor. Notwithstanding the foregoing, nothing herein contained shall be deemed to constitute a waiver of the sovereign immunity of the State, which immunity is hereby reserved to the State. This covenant shall survive the termination of this agreement.

12.1 PATENT PROTECTION. The seller agrees to indemnify and defend the State of New Hampshire from all claims and losses resulting from alleged and actual patent infringements and further agrees to hold the State of New Hampshire harmless from any liability arising under RSA 382-A:2-312(3). (Uniform Commercial Code).

13. TOXIC SUBSTANCES. In compliance with RSA 277-A known as the Workers Right to Know Act, the vendor shall provide Material Safety Data Sheets with the delivery of any and all products covered by said law.

14. NOTICE. Any notice by a party hereto to the other party shall be deemed to have been duly delivered or given at the time of mailing by certified mail, postage prepaid, in a United States Post Office addressed to the parties at the addresses given below.

15. AMENDMENT. This agreement may be amended, waived or discharged only by an instrument in writing signed by the parties hereto.

16. CONSTRUCTION OF AGREEMENT AND TERMS. This agreement shall be construed in accordance with the laws of the State of New Hampshire, and is binding upon and inures to the benefit of the parties and their respective successors and assigns.

17. ADDITIONAL PROVISIONS. The additional provisions (if any) have been set forth as Exhibit "A" hereto.

18. ENTIRE AGREEMENT. This agreement, which may be executed in a number of counterparts, each of which shall be deemed an original, constitutes the entire agreement and understanding between the parties, and supersedes all prior agreements and understandings relating hereto.

BID INVITATION FOR: CONCRETE ELECTRIC VAULTS, SUPPLY AND DELIVER

PURPOSE:

The purpose of this bid invitation is to establish a contract in the form of a purchase order for supplying the State of New Hampshire , DRED with *CONCRETE ELECTRIC VAULTS*, in accordance with the requirements of this bid invitation and any resulting order. These item(s) shall be a one time order with delivery required to the location/s indicated in the F.O.B. section of this bid invitation.

SPECIFICATION COMPLIANCE:

Bidder's offer must meet the required specifications as written.

VENDOR CERTIFICATIONS:

All bidders must be duly registered as a vendor authorized to conduct business in the State of New Hampshire.

STATE OF NEW HAMPSHIRE VENDOR APPLICATION:

Bidders must have a completed Vendor Application and W-9 Form on file with the NH Bureau of Purchase and Property. See the following website for information on obtaining and filing the required forms (no fee).

<http://www.admin.state.nh.us/purchasing/>

NEW HAMPSHIRE SECRETARY OF STATE REGISTRATION:

A person or persons conducting business under any name other than his/her own legal name must register with the NH Secretary of State. Businesses are classified as "Domestic" (in-state) or "Foreign" (out-of-state). Please visit the following website to find out more about the requirements and filing fees for both classifications:

<http://www.nh.gov/sos/corporate/>

BID PRICES:

Bid prices shall include delivery and all other costs. Bid prices should be government and/or educationally discounted prices.

F.O.B.:

The F.O.B. shall be destination to the following delivery point:

New Hampshire Department of Resources
And Economic Development
Summit Power Below Tree Line Conduit Project
C/o Mt. Washington Railway Company (Cog RR)
Maintenance Facilities
Rt 302, - Base Road
Bretton Woods, NH 03575

REQUISITION NO.: 111246

OFFER:

Successful bidder hereby offers to sell the required items to the State of New Hampshire at the following price(s):

The unit prices and extensions indicated should be government and/or educationally discounted prices.

<u>QTY</u>	<u>UNIT</u>	<u>DESCRIPTION</u>	<u>DELIVERED PRICES</u>	
			<u>UNIT</u>	<u>EXTENSION</u>
7	Each	4' W x 6' L x 7' D (interior dimensions) Concrete Electric Vault with Watertight Hatch and accessories	\$_____	\$_____

Attached are all specifications and sketches for compliance. **Acceptance and delivery are date sensitive.**

To be supplied in two halves to be field assembled, including sealing materials and accessories listed in the specification

Vaults are to be delivered by a truck that has a built in crane to unload. The vaults will be unloaded and left in a field/lay down area until they are ready to install.

Notify Charlie Kension, General Manager at Mt. Washington Cog Railway 603 278-5404, with notification of delivery 24 hours before delivery is scheduled.

See sketches 16134—SK1, 2, 3. These vaults must be delivered for installation on the slopes of Mt. Washington, NH this Fall. The vaults shall comply with the enclosed specifications.

The vault manufacturer's production facilities shall be open for inspection by the owner or his designated agents with a reasonable advanced notice. During inspection, the manufacturer shall demonstrate that it has facilities capable of manufacturing and testing the vault and/or fittings to standards required by this specification. Vaults and materials which has been tested by the manufacturer and falls outside of the appropriate limits set forth in this specification, will be cause for rejection.

Submit complete catalog information and shop drawings , certified test reports, for all materials and equipment (6) copies of all documents, to the ENGINEER for approval.

QA/QC records shall be maintained intact for a minimum of one year from the date of production.

A Certificate of insurance MUST be submitted before a contract is awarded to: Odie L. Champagne, Purchasing Agent, State House Annex, 25 Capitol Street, Concord, NH 03301.

DELIVERY TIME:

Successful bidder hereby agrees to accomplish delivery of any item awarded within _15_____ days after receipt of the order.

BID RESULTS:

Bid results will not be given over the telephone. Bid results will be mailed to you if you include a self addressed envelope with the correct amount of postage on it. Bid results may also be viewed on our web site at: <http://admin.state.nh.us/purchasing/bids.asp>

NOTE: BID MUST BE SIGNED ON FRONT COVER SHEET TO BE CONSIDERED.

Electric Transmission System for the Summit Facilities of Mt. Washington

Electrical Component Procurement

Technical Section

Bid Package No: 2 – Electrical Components – Electric Vaults and Hatches

1.01 Summary:

Quantity	Description	Type	Delivery	Delivery Date
7 each	4' W x 6' L x 7' D (interior dimensions) concrete electric vault with watertight hatch (36" x 36") and accessories as shown on these specifications	Supplied in two halves to be field assembled, including sealing materials and accessories listed in the specification – see sketches 16134--SK1, 2, 3	See Below	On or before 9/15/04

The State of New Hampshire is seeking bids for a vendor to supply 7 concrete electrical vaults with field installed hatches. These vaults must be delivered for installation on the slopes of Mt. Washington, NH this Fall. The vaults shall comply with these specifications.

Engineer:

John Heneage, PE
Dufresne-Henry
175 Canal St. #600
Manchester, NH 03101
Telephone: (603) 669 8672
Fax: (603) 669 7636

Delivery Point (Job Site):

NH DRED
Summit Power Below Tree line Conduit Project
c/o Mt Washington Railway Company (Cog RR)
Maintenance Facilities
Rt 302, - Base Road
Bretton Woods, NH 03575

Telephone: (603-278-5404)

CERTIFICATION

I hereby certify that this Specification was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of New Hampshire

Date: 8/4/04

Registration No. P.E. # 10253

Signed: original signed and sealed

John F. Heneage, P.E.

Vault Characteristics and Accessories

Size (internal dimension) 4 ft wide, 6 ft long, and 7 ft high

Hatch: Square 3 ft x 3 ft, watertight (see sketch) – bolt on to top of vault

See sketches 16134-SK1, 16134-SK2 and 16134-SK3 for mechanical arrangement of components and accessories.

Accessories:

1. Ladder rungs cast into side by hatch
2. Uni-strut on side walls as shown on sketches
3. 4" Sch. 40 HDPE conduit entrances as shown on the drawings (4 on each 4' wall, lower at 51" and 60" above floor, note duct OD is 4.5", hole size to be 6" for accommodate O-Z/Gredney type penetration seal fitting)
4. Pulling eye cast into side walls 30" and 54 " above floor on the 4 ft walls and 60" above the floor on the 6 ft side with the rack inserts (2 on each 4' wall, total of 4, 2 each on the 6 wall with the rack inserts, total of 6 pulling eyes)
5. Sumps (2)
6. Ground clamp, cast in ground wire (~21 ft in concrete around edge of lower half, with pig tail) and ground pig tail as shown on drawings.
7. 36" x 36" aluminum hatch with a 8" lip, hatch to be field installed by others.
8. Inserts for racks as shown on the sketches.
9. All other miscellaneous fittings and devices to provide a complete vault as shown on the sketches.

Concrete: 5000 psi minimum strength at 28 days cure, 6" thick walls, split bottom (two halves field assembled).

Steel Reinforcing – ASTM A-615 Grade 60

Construction Joint Sealed with 1" diameter Butyl Rubber Resin or equivalent

Note top and bottom sections approximate weight is 5.7 tons each.

REFERENCE STANDARDS

A. The vaults shall be designed, manufactured and tested in accordance with the latest applicable standards including:

ASTM C857 Recommended Practice for Minimum Structural Design Loading for Underground
Precast Concrete Utility Structures

ACI 318 Building Code Requirements for Reinforced Concrete

AASHTO HS-20 Loading (excluding hatch)

ASTM A615 Specification for Deformed and Plain Billet Steel Bars for Concrete Reinforcing

ASTM C33 Specification for Concrete Aggregates
ASTM C39 Test Method for Compressive Strength of Cylindrical Concrete Specimens
ASTM C136 Test Method of Sieve Analysis for Fine and Coarse Aggregates
ASTM C143 Test Method for slump of Hydraulic Cement Concrete
ASTM C150 Standard Specification for Portland Cement
ASTM C192 Practice for making and curing Concrete Test Specimens in the Laboratory
ASTM C231 Test Method of Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260 Specifications for Air-Entraining Admixtures for Concrete
ASTM C494 Specifications for Chemical Admixtures for Concrete

D. Quality and Workmanship:

The vault manufacturer's production facilities shall be open for inspection by the owner or his designated agents with a reasonable advanced notice. During inspection, the manufacturer shall demonstrate that it has facilities capable of manufacturing and testing the vault and/or fittings to standards required by this specification. Vaults and materials which has been tested by the manufacturer and falls outside of the appropriate limits set forth in this specification, will be cause for rejection.

QA Records -

QA/QC records shall be maintained intact for a minimum of one year from the date of production.

- E. Qualification of manufacturers:** The manufacturer shall have manufacturing and quality control facilities that are capable of producing and assuring the quality of the conduit or casing required by these specifications. The manufacturer's production facilities shall be open for inspection by the owner or his Authorized Representative. The conduit and casing manufacturer shall be ISO Certified in accordance with the current edition of ISO 9001 and a documented quality management system that defines product specifications and manufacturing and quality assurance procedures that assure conformance with customer and applicable regulatory requirements. Upon request, the manufacturer shall provide a current Certificate of Compliance form and independent ISO 9000 Registrar.

SUBMITTALS

The successful bidder will be required to submit shop drawings per the following.

- A. Submit complete catalog information and shop drawings, certified test reports, for all materials and equipment. Six (6) copies of all documents shall be provided to the ENGINEER for approval.
- B. All shop drawings shall be checked for accuracy and contract requirements before submittal to the ENGINEER. Shop drawings shall bear the signature of the SUPPLIER and date checked, and shall be accompanied by a statement that the Drawings have been examined for conformity to specifications and drawings. This statement shall also list all discrepancies with the specifications and drawings. Shop drawings not so checked and noted by the SUPPLIER will be returned to him without approval.
- C. The ENGINEER'S review will be only for conformance with the design concept of the project and compliance with the specifications and contract drawings. The ENGINEER'S approval shall in no way relieve the SUPPLIER from the responsibility of, or the necessity of, furnishing

materials and workmanship required by the project drawings and specifications which may not be indicated on the shop drawings.

- D. All such equipment and materials supplied without the approval of the ENGINEER shall be subject to removal and shall be replaced with materials so approved by the ENGINEER at the SUPPLIER'S expense.
- E. No substitutions are to be made and materials are to be of type and make specified unless written approval of other materials is obtained from the ENGINEER. No substitutions will be considered unless complete information is given and the addition or deduction to the base contract price is indicated. Approval by the ENGINEER of substitute materials will not relieve the SUPPLIER of the responsibility of providing materials that fit properly into available space conditions and meet all applicable requirements of these Specifications. All extra charges by other trades, including excessive time required by the ENGINEER to evaluate the acceptability of a substitution, caused by the SUPPLIER desired to use a substitution shall be paid for by the SUPPLIER. The SUPPLIER shall also provide all necessary additional field drawings and shop drawings required for the substitutions.

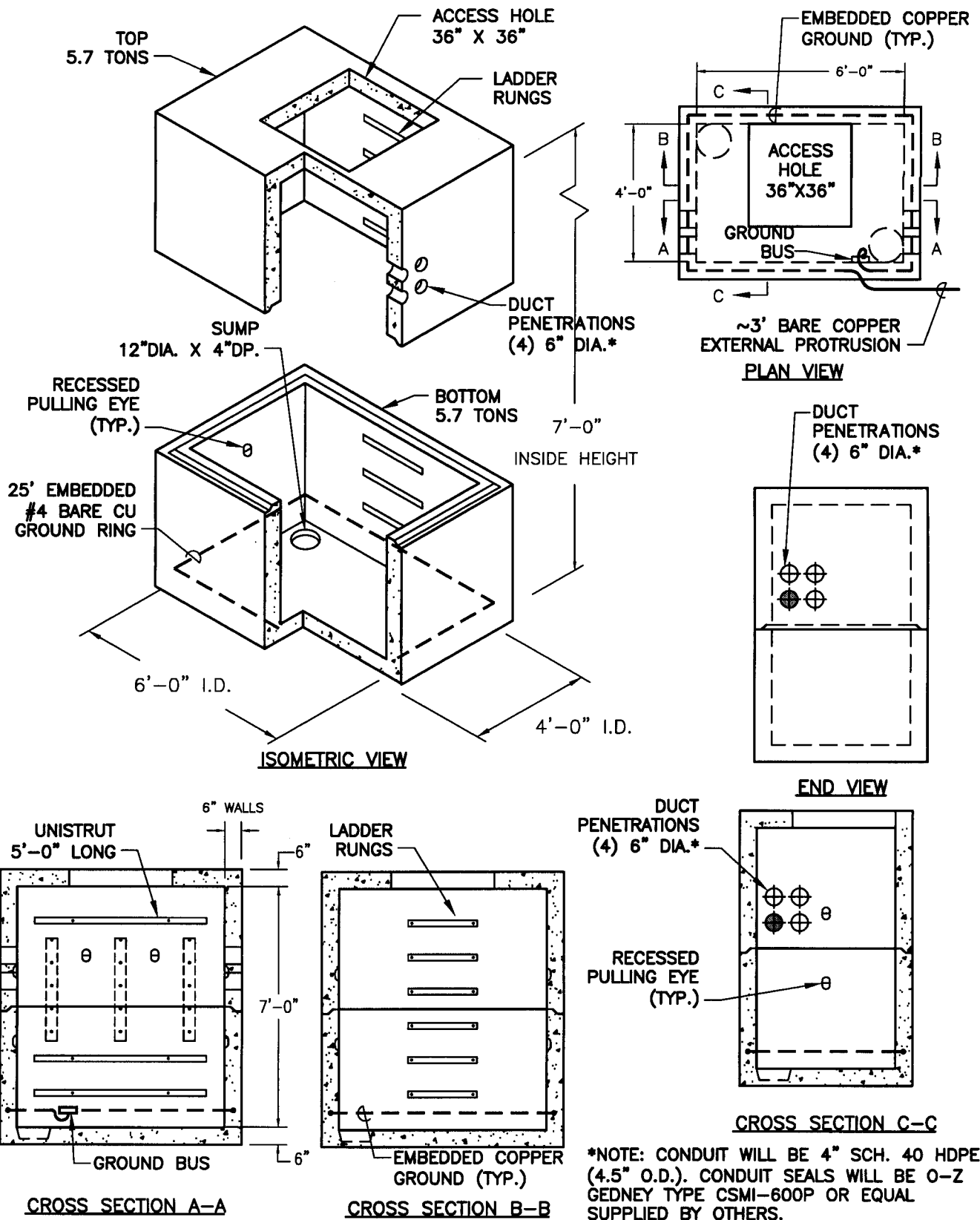
DELIVERY: The SUPPLIER'S quotation for shall include all costs associated with the fully insured shipment of the equipment from the Supplier's source of manufacture/fabrication to the project job site. Material shall be delivered during normal business hours (8 AM to 5 PM) Monday through Friday. The SUPPLIER must coordinate with the project Engineer and the Cog RR to schedule and arrange for delivery of heavy items requiring lifting from trucks.

SCHEDULE: The SUPPLIER'S quotation for the material in this bid package shall be fabricated and delivered in accordance with the project schedule outlined below. No allowance for additional costs or fees will be allowed.

Project Schedule

- a) Request for Quotations for project materials – see bid documents
- b) Receipt of Bids see bid documents
- c) Award of Bid see bid documents
- d) Delivery of Shop Drawings 1 weeks ARO
- e) Review of Shop Drawings 2 days from receipt (fax submission acceptable)
- f) Delivery of equipment to site: September 15, 2004

FACTORY ASSISTANCE: Not required.



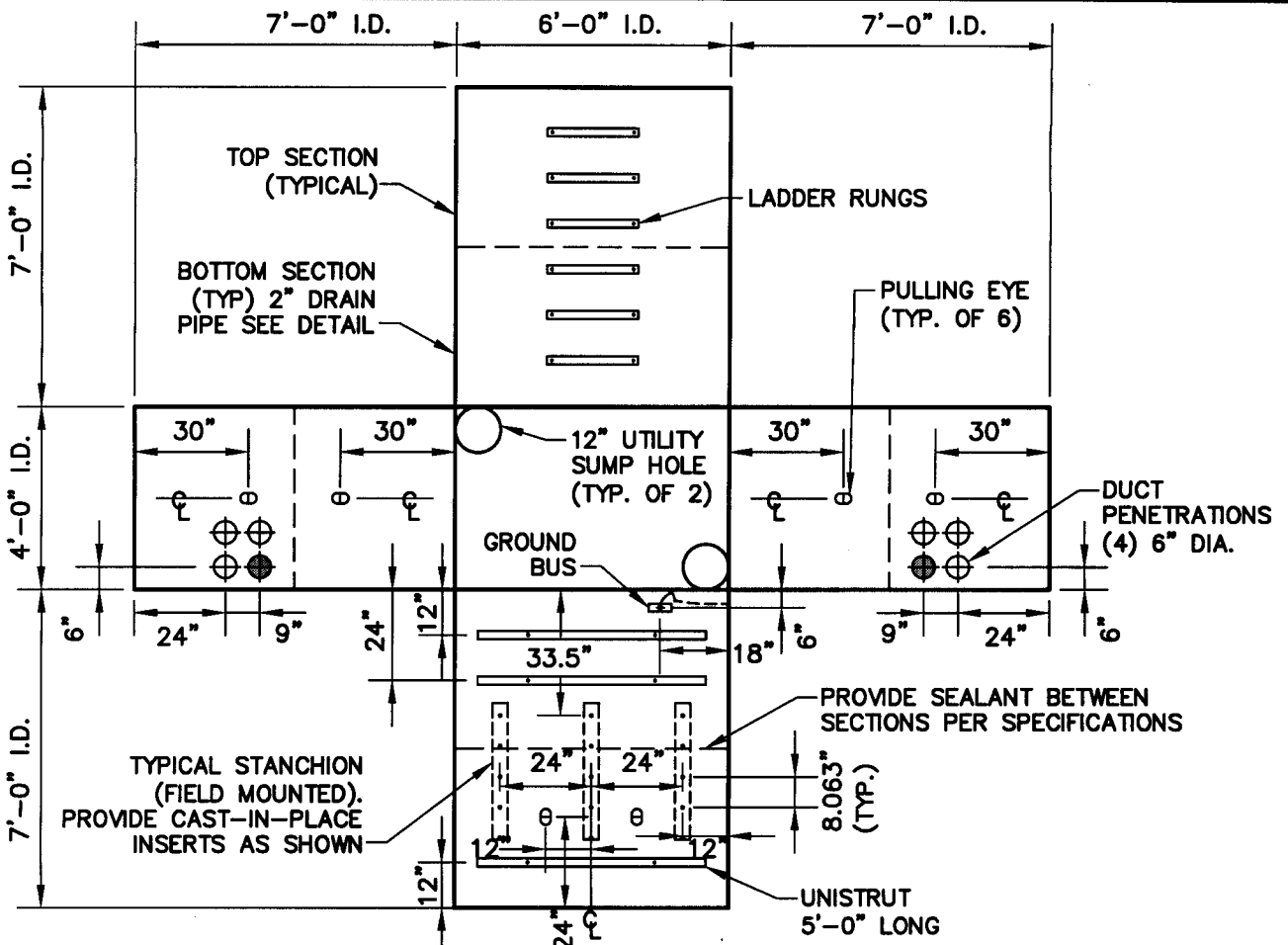
DH
Dufresne-Henry
 Manchester, New Hampshire
 Tel. (603) 669-8672
 www.dufresne-henry.com

MT WASHINGTON
 ELECTRICAL SUPPLY
**UNDERGROUND ELECTRICAL
 VAULT DETAILS**

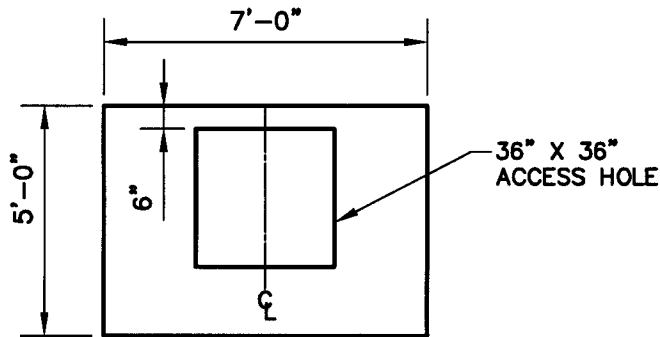
MT. WASHINGTON

NEW HAMPSHIRE

Project No.	2040031
Proj. Mgr.	JFH
Scale	AS NOTED
Date	08/04/2004
A	16134-SK1



UTILITY HOLE - 'TAKE-OFF' DETAIL



UTILITY HOLE - TOP VIEW

NOTES:

1. PROVIDE GROUND BUS, HARGER (800-842-7437) GBIT SERIES OR EQUAL. GROUND BUS SHALL BE FURNISHED WITH WALL MOUNTING BRACKETS, INSULATORS, AND A 25' EXOTHERMICALLY WELDED #4 BARE COPPER TAIL. THE TAIL SHALL BE CAST IN THE CONCRETE AS SHOWN, AND ~3FT. SHALL PROTRUDE FROM THE WALL FOR CONNECTION TO SUPPLEMENTAL EXTERNAL GROUNDING SYSTEM.
2. PROVIDE CAST-IN-PLACE INSERTS FOR FUTURE MOUNTING OF CABLE RACK STANCHIONS. INSERTS SHALL BE UNDERGROUND DEVICES (847-205-9000) CAT# FNMA-16 1/2"-13 POLYIMIDE INSERTS. LOCATE INSERTS AS INDICATED ON THESE DRAWINGS (16134-SK1 & 16134-SK2).

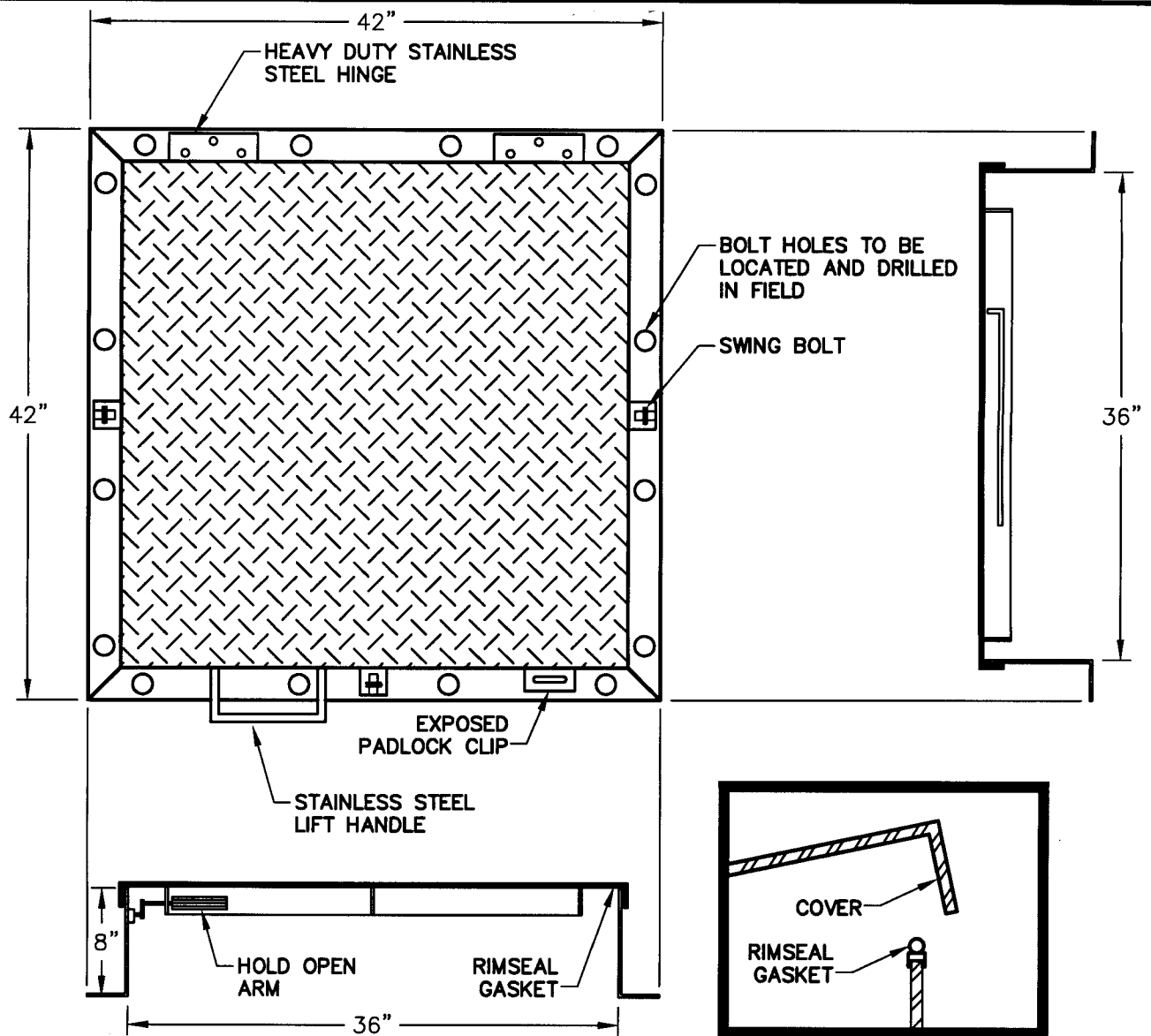
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 www.dufresne-henry.com

MT WASHINGTON
 ELECTRICAL SUPPLY
**UNDERGROUND ELECTRICAL
 VAULT DETAILS**

MT. WASHINGTON

NEW HAMPSHIRE

Project No.	2040031
Proj. Mgr.	JFH
Scale	AS NOTED
Date	08/04/2004
A	16134-SK2



VAULT HATCH DETAIL

NOTES:

1. UNIT SHALL BE RATED FOR 625 LBS. PER S/F.
2. EACH HATCH SHALL BE EQUIPPED WITH A HOLD OPEN ARM. DOOR SHALL LOCK OPEN IN THE 90 DEGREE POSITION.
3. EXTERIOR OF FRAME WHICH COMES IN CONTACT WITH CONCRETE SHALL HAVE ONE COAT BLACK BITUMINOUS PAINT.
4. EACH HATCH SHALL BE SUPPLIED WITH AN EXPOSED PADLOCK CLASP.
5. UNIT SHALL BE SUPPLIED WITH A RIMSEAL GASKET ON INSIDE VERTICAL LEG OF ANGLE. SWING BOLTS WILL KEEP COVER PRESSED TIGHTLY AGAINST GASKET.
6. SEALING IN BETWEEN FRAME AND STRUCTURE TO BE RESPONSIBILITY OF INSTALLING CONTRACTOR.

DH
Dufresne-Henry
 Manchester, New Hampshire
 Tel. (603) 669-8672
 www.dufresne-henry.com

MT WASHINGTON
 ELECTRICAL SUPPLY
**UNDERGROUND ELECTRICAL
 VAULT DETAILS**

MT. WASHINGTON

NEW HAMPSHIRE

Project No.	2040031
Proj. Mgr.	JFH
Scale	AS NOTED
Date	08/04/2004
A	16134-SK3